



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Diab et al.	)	Group Art Unit 3736
App. No.	:	08/943,511	)	
Filed	:	October 6, 1997	)	
For	:	SIGNAL PROCESSING APPARATUS	)	
Examiner	:	Unknown	)	

Preliminary Amendment

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Prior to Examination on the merits, please add the following new claims.

In The Claims:

Please cancel Claims 19-34, 37 and 38. Please add the following new Claims 39-50.

39. A pulse oximeter comprising:

an input configured to receive at least two measured intensity signals generated by the detection of multiple wavelengths of light transmitted through body tissue, said intensity signals each having a portion substantially dependent upon arterial blood oxygen saturation;

a Kalman filter that calculates an estimate of a physiological signal related to at least one of said intensity signals; and

a processor that tracks said portions in the presence of motion based upon said estimate to derive an oxygen saturation value.